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Memorandum

To: The Honorable Doug Domenech
Secretary of Natural Resources

Cc: The Honorable Todd Haymore, Secretary of Agriculture and Forestry
Russ Perkinson, Virginia Department of Conservation and Recreation
Alan Pollock, Virginia Department of Environmental Quality

Date: April, 19 2010

Subject: **Comments on Chesapeake Bay TMDL Watershed Implementation Plan Development**

Thank you for the opportunity to serve on the Secretary's Advisory Group (SAG) concerning development of Virginia's Watershed Implementation Plans for the Chesapeake Bay Total Maximum Daily Load (TMDL). I appreciate this opportunity to provide some comments following the February 26 SAG meeting.

VPF is a nonprofit trade association, founded in 1925, that represents the poultry and egg industry in Virginia. VPF's members include poultry processing companies that operate facilities which have Clean Water Act waste water discharge permits (VPDES). Our members also include individual poultry farms, which use nutrient management plans and other BMPs to manage dry poultry litter (manure and bedding) and minimize nonpoint source runoff pollution; these farms do not have a "point source" discharge to waters of the U.S. The poultry industry generates farm income that helps keep farmland in production and slow conversion of farmland for other uses.

The poultry industry employs about 10,000 people in Virginia and supports the livelihood of nearly 1,100 family farms that raise chickens, turkeys or eggs. Yet, Virginia's poultry industry has contracted. In the mid-1990's, Virginia typically produced about 25 million turkeys annually; by the mid 2000's the typical year produced 20 million. In 2008, the figure was 18 million. The chicken industry reveals a similar trend falling from about 265 million broiler chickens produced in the mid-2000's down to 259 million in 2008.

Poultry Industry Environmental Stewardship

Virginia's poultry industry has been a responsible and proactive environmental steward on a voluntary basis and through compliance with existing government regulations. The industry has long been part of the solution to a cleaner Bay and local waterways. Please consider the following:

- In 1995, Virginia's poultry industry received a "Friend of the Bay" award from the Commonwealth of Virginia for its voluntary initiative to implement nutrient management plans (NMPs) on all Valley poultry farms by the year 2000, a goal largely achieved.

- VPF estimates at least 80 percent of poultry producers in the Shenandoah Valley have constructed sheds for storing poultry litter before it is utilized. (Those with or without sheds must store litter according to state regulatory criteria.)

- VPF and poultry processors provide educational programs for growers, litter brokers and end-users of litter:

  - ✓ Sponsored operator training program for growers.

  - ✓ Sponsored educational meetings for poultry litter brokers.

  - ✓ Sponsored educational materials for end users.

- VPF and poultry processors are contributing to programs that facilitate transport of poultry litter from concentrated production areas to farmland that can utilize additional nutrients:

  - ✓ Poultry litter hotline and marketing program.

  - ✓ Provided grants to Louisa, Madison, and Fauquier County Farm Bureaus to rent manure spreaders for facilitating poultry litter applications outside of concentrated production regions.

  - ✓ Helped fund transport subsidy pilot project.

- Research:

  - ✓ More than $160,000 provided to Virginia Tech water quality research projects since 2000.

  - ✓ Provided funds for research and pilot projects to convert poultry litter to energy.

- Feed management:

- ✓ Phytase phosphorus reduction enzyme incorporated in poultry feed mills, resulting in a more than 20 percent, on average, reduction in phosphorus in Virginia poultry litter.

- Collaboration:
  - ✓ VPF participates in the Virginia Waste Solutions Forum, a collaboration of agriculture, environmental groups, academia, government agencies, and others that have worked since 2004 to identify economically viable solutions for surplus animal manure. Several of the above initiatives evolved from the Forum.
  - ✓ VPF was a founding member of the Shenandoah Valley Pure Water Forum, another group of diverse interests working collaboratively toward improved water quality.
  - ✓ VPF participated in a coalition of agricultural and conservation groups that worked successfully together to obtain increased funding for the Virginia Agricultural BMP cost-share program.

Aside from the above voluntary efforts, Virginia's poultry industry is already heavily regulated.

In 1999, the Virginia General Assembly enacted the Poultry Waste Management Program (House Bill 1207). This law charged the State Water Control Board with developing a regulatory program requiring a general permit, incorporating a state-approved, phosphorus-based, nutrient management plan and mandating adequate waste storage, for growers. The program requires tracking and accounting of litter transferred off poultry farms. Growers with 20,000 or more broilers or laying hens or 11,000 or more turkeys were required to obtain a state-approved nutrient management plan and file for the general permit by October 1, 2001. This is far below the size thresholds under the federal CAFO permit and captures a large majority of poultry farms in Virginia.

Furthermore, the State Water Control Board recently adopted amendments to the Virginia Poultry Waste Management Program to impose additional regulatory requirements upon litter transporters and non-poultry farmers that receive poultry litter for use on their farm. The regulation now imposes enforceable requirements governing "end-users'" land-application and storage of poultry litter.

In addition, poultry processors are being required, with no cost-share, to spend millions of dollars on wastewater treatment plant and storm water upgrades. New permits must meet close to "limits of technology" reductions for total nitrogen, in some cases reducing nitrogen by 95-99 percent at a cost of up to $3 million per plant. This is on top of previous reductions in phosphorus to limits as low as .1 mg/liter that cost upwards of $2 million for some plants.

As you can see, Virginia's poultry industry has been a responsible and proactive environmental steward on a voluntary basis and through compliance with government regulations. It is important that these activities and programs are considered in Bay modeling and given credit in Virginia's Bay cleanup plans.

Assessing and Refining the Chesapeake Bay Model Assumptions

It is essential that the assumptions in the Chesapeake Bay Model are correct so that solutions can be accurately applied to problems. Voluntary practices must be counted in the Bay Model, and the model must utilize up-to-date animal production data and accurately incorporate current management practices.

The model must be based on realistic assumptions about farming operations. In the case of animal feeding operations (AFOs), the model assumes that 15 percent of animal manure is lost during storage. What is the basis for such an assumption? We challenge the modelers to provide scientifically based documentation that 15 percent of litter in storage on poultry farms is lost to the environment during storage or what, if any, quantities of nitrogen and phosphorus contained in such litter enters waters of the U.S. In Virginia, poultry litter is regulated and managed in a manner that makes us seriously question this assumption.

The earlier model (version 4.3) utilized outdated agricultural census data and, due to the lack of complete documentation in version 5.3 and in Scenario Builder, it is not possible to currently tell what agricultural census data are being used. While still significant, Virginia's poultry industry has contracted as described earlier in these comments. There is a growing trend within the industry to reduce the frequency of total house cleanout. Instead producers are employing partial cleanouts or "decaking" over longer durations. Decaking consists of removing roughly the top third of litter from the poultry house and leaving the reminder for the next grow-out cycle. This, combined with the fact the industry has declined in size suggests that actual tonnages of land applied litter may be substantially lower than model estimates.

Finally, it is important for Virginia to supply EPA with all applicable information about BMPs being implemented in the Commonwealth. It recently came to our attention that the Commonwealth is the only state in the Bay Watershed that is not providing EPA with data on poultry litter transport. Especially now that we have adopted the new "end-user" regulations, all litter must either be applied onsite according to a phosphorus-based nutrient management plan or managed to account for phosphorus buildup and other environmental risk factors if transferred offsite. Virginia must ensure that we get credit for these BMPs in the model. This is imperative as the simplistic approach being used by the modelers simply assumes excess nutrients are transferred to neighboring counties once the nutrient have been applied at the appropriate agronomic rate to crops and pasture within the county in which it was generated.

Again, we bring these issues to your attention because we are concerned that the model is not entirely accurate with regard to poultry operations. It is critical that EPA and state agencies

work closely with affected industries to ground-truth the assumptions used in the model. We welcome any such opportunities.

Comments on Information Provided at February 26, 2010 SAG Meeting

We agree with the Commonwealth's strategy to build upon the foundation of the tributary strategies. Extensive work has already been done. Major nutrient and sediment reductions have been achieved since 1985. Virginia has plans in place, which can, with some refinements, go a long way toward achieving Bay restoration goals. However, it is important that we proceed in a scientifically sound, economically sensible manner in developing additional measures.

During the SAG meeting on February 26, staff distributed a DRAFT document entitled, "Chesapeake Bay TMDL Source Sector Allocation Worksheets for Virginia." The document outlined approaches and efforts undertaken by agency staff to evaluate development of enhanced program implementation levels for existing BMPs and potential additional BMPs for various sectors. We are not entirely clear on the intent of this document, but some comments follow.

Subject matter experts – It is most appropriate for staff to consult experts from government agencies and academia to evaluate progress in BMP implementation and seek ideas for additional BMPs. However, it also would have been prudent for staff to consult private sector sources directly involved with the relevant industries. The SAG provides for private sector involvement, but upfront consultation with VPF would have resulted in a better, more accurate draft. For example, rather than citing 375 turkey farms, the document might have reflected a recent industry survey that indicates Virginia has 287 turkey farms. This is a major discrepancy, which if factored into Virginia's Watershed Implementation Plan (WIP), would substantially overestimate production of poultry nutrients.

Mortality Composters – Under "Additional BMPs" for agriculture, the document appears to call for mortality composters on 100 percent of poultry operations. First of all, this would not be an additional BMP in the sense of it being new. The vast majority of poultry operations are regulated under the VPA General Permit Regulation for Poultry Waste Management. This regulation prohibits use of burial pits for disposal of carcasses resulting from routine poultry mortality and requires proper mortality management. Most poultry producers already use composting facilities. Some use small incinerators, and some take carcasses to rendering plants. If the Bay Model gives credit for proper disposal of poultry mortalities, then Virginia can take credit for practices already in place. Requiring composters on all poultry farms is inappropriate because composting is not the only option for proper disposal. We seek clarity on what the state actually proposes on this issue.

Manure Transport – The document proposes transport of 35,000 tons of poultry litter out of the Bay Watershed from three unnamed counties. It also proposes transport of 125,000 tons from these counties to nutrient deficit counties within the Bay Watershed. This "BMP" is a concern because it implies that measures or actions will be needed to *make* the prescribed transport occur.

We believe this could be costly and unnecessary, when a combination of free market forces and existing regulations essentially achieve the purposes of this "BMP."

As previously stated, Virginia regulations require poultry farms with more than 20,000 chickens or 11,000 turkeys to be permitted and implement a phosphorus-based nutrient management plan. Poultry farmers must keep a record of litter transferred to other farmers, and newly adopted state regulations require the recipient or end-user of transferred litter to apply litter according to strict guidelines to prevent phosphorus buildup in soils and nutrient losses. Furthermore, poultry litter generated in concentrated poultry production regions is dispersed through market forces in excess of 100 miles in some instances due to the strong demand for this product as an organic fertilizer and its soil improvement qualities.

Furthermore, a Virginia Tech study ("Potential for Marketing Shenandoah Valley Poultry Litter as Fertilizer;" 7-21-05; Pease, Mullins) shows that the Valley would need to produce twice as much poultry litter as it does in order to meet the phosphorus (P205) uptake needs of the hay, pasture, and cropland within the Central Valley (main poultry producing area) and adjoining counties. In addition, Virginia Tech soils test data for the Central Valley show that even Rockingham and Page counties (top two poultry counties) have considerable acreage of farmland that have less than excessive phosphorus saturation levels.

In summary, costly litter transport subsidies are not necessary, and Virginia should be able to point to existing regulations as reasonable assurance of proper litter application rates on poultry farms and any other farms, regardless of their geographic location.

Phytase Phosphorus Feed Reductions - Virginia poultry companies have been adding the phosphorus reduction enzyme Phytase to poultry feed, which enables them to reduce phosphate in feed formulations, for about ten years. In 2007, all Virginia poultry companies signed a formal Memorandum of Agreement (MOA) with Virginia Department of Conservation and Recreation (VDCR) concerning the use of enzymes, such as Phytase in poultry rations and reduction of phosphorus in feeds. Through the MOA, poultry companies agreed to a "goal" of reducing phosphorus levels in poultry litter within their respective complexes by 30 percent by December 31, 2010, from a 1995 baseline.

Research has shown that a 30 percent or greater reduction of phosphorus may be possible in some circumstances. However, as acknowledged in the MOA, variations in operations and factors such as bird size may impact operations' ability to achieve a 30 percent reduction. The parties to the agreement, therefore, emphasized that 30 percent was a goal, which poultry companies would make best efforts to achieve and possibly exceed. At the present time, VPF believes that all poultry companies are adding Phytase at the maximum prescribed levels and minimizing the addition of phosphate to feed to the extent they deem feasible while ensuring the health and welfare of poultry flocks through proper nutrition. The companies have an economic incentive to minimize the addition of phosphate, but will not go beyond what poultry

nutritionists believe is needed to maintain the health of birds. In our view, it is appropriate to take credit for the achievable reductions, but not to establish unrealistic expectations.

Ammonia Source Reduction – The document seems to call for application of unspecified source reduction technologies for 63 percent of broilers and 37 percent of turkeys. Research is ongoing to measure ammonia emissions from livestock and poultry operations in the United States. We are not aware of commercially available source reduction technologies. Most poultry growers use litter treatment products to reduce ammonia in poultry houses. With incomplete research and a lack of known, cost-effective control technologies, we oppose the inclusion of this measure in the WIP. We also question how the above percentages were determined. Specifying the implementation of undeveloped technologies at random percentages is not feasible especially in light EPAs threat of consequences for not obtaining reductions.

Recognizing Successful State Programs

Rather than push the limits of its regulatory authority, EPA should recognize the efficacy of state programs. And it is imperative that Virginia point out and defend the efficacy of our programs. For example, the Virginia Poultry Waste Management Act and regulations are equally and in some cases more efficacious for water quality protection than federal CAFO permits. Lowering the threshold for farmers to be covered under federal CAFO permits only burdens farmers with more paperwork and does nothing for water quality.

Furthermore, for states such as Virginia to effectively prepare and submit their Watershed Implementation Plans and make regulatory decisions of no small consequence to animal agriculture and other stakeholders, EPA must release ALL technical documentation on its modeling and input assumptions well ahead of the Chesapeake Bay TMDL deadlines in order to provide time for adequate public review.

Conclusion

Virginia has identified some priority agricultural BMPs and directed cost-share and other incentives toward their adoption. Rather than new regulatory mandates, the most good can be achieved through consistent and reliable cost-share funding and technical assistance through local conservation agencies.

Please let me know if you would like additional information. Thank you for your consideration of these comments.